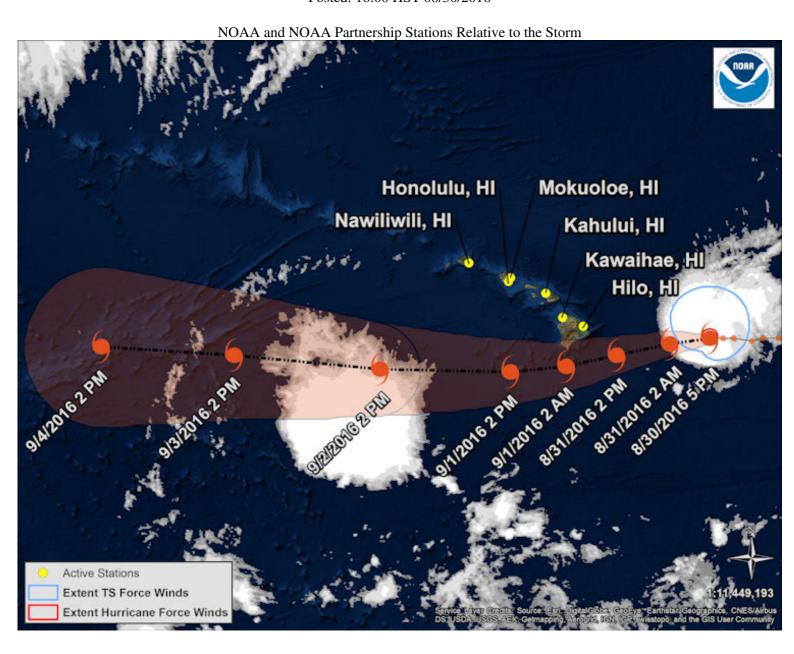




Hurricane MADELINE QuickLook Posted: 18:00 HST 08/30/2016



# Storm Analysis

As of 8/30/2016 18:00 HST, water levels across the Hawaiian Islands are slightly elevated and range between 0.2 and 0.7 feet above normal tide levels. Winds are generally 20 knots or less with slightly higher gusts to 25 knots on the windward facing shores of the Island of Hawai'i and Maui. Barometric pressure has not yet begun to fall across the Hawaiian Islands.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

Analyst: CMF

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# SELECT CENTRAL PACIFIC HURRICANE CENTER ADVISORY INFORMATION:

HURRICANE MADELINE ADVISORY NUMBER 18 NWS CENTRAL PACIFIC HURRICANE CENTER HONOLULU HI EP142016 500 PM HST TUE AUG 30 2016

...DANGEROUS HURRICANE MADELINE TRACKING WESTWARD TOWARDS HAWAII...

SUMMARY OF 500 PM HST...0300 UTC...INFORMATION

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LOCATION...19.3N 150.3W
ABOUT 315 MI...505 KM E OF HILO HAWAII
ABOUT 510 MI...825 KM ESE OF HONOLULU HAWAII
MAXIMUM SUSTAINED WINDS...110 MPH...175 KM/H
PRESENT MOVEMENT...W OR 270 DEGREES AT 10 MPH...17 KM/H
MINIMUM CENTRAL PRESSURE...972 MB...28.71 INCHES

WATCHES AND WARNINGS

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CHANGES WITH THIS ADVISORY:

None.

# SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Hurricane Warning is in effect for...

\* Hawaii County.

A Tropical Storm Watch is in effect for...

\* Maui County including the islands of Maui, Molokai, and Lanai

A Hurricane Warning means that hurricane conditions are expected somewhere within the warning area. A warning is typically issued 36 hours before the anticipated first occurrence of tropical storm force winds, which make outside preparations difficult or dangerous. Preparations to protect life and property should be rushed to completion.

A Tropical Storm Watch means that tropical storm conditions are possible within the watch area within 48 hours.

Interests elsewhere in the main Hawaiian Islands should monitor the progress of Madeline.

For storm information specific to your area, please monitor products issued by the National Weather Service office in Honolulu, Hawaii.

### **DISCUSSION AND 48-HOUR OUTLOOK**

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At 500 PM HST (0300 UTC), the center of Hurricane Madeline was located near latitude 19.3 North, longitude 150.3 West. Madeline is moving toward the west near 10 mph (17 km/h). This motion is expected to continue into the evening, followed by a turn toward the west-southwest tonight through Thursday. On the forecast track, the center of Madeline will pass dangerously close to Hawaii County Wednesday and Wednesday night.

Maximum sustained winds are near 110 mph (175 km/h) with higher gusts. Gradual weakening is forecast during the next 48 hours. However, Madeline is expected to be at hurricane strength when it passes near Hawaii County.

Hurricane-force winds extend outward up to 25 miles (35 km) from the center and tropical-storm-force winds extend outward up to 125 miles (205 km).

The estimated minimum central pressure is 972 mb (28.71 inches).

## HAZARDS AFFECTING LAND

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WIND: Hurricane conditions are expected to develop over Hawaii County as early as late Wednesday and continue into early Thursday. Tropical storm conditions are possible over Maui County, including the islands of Maui Molokai and Lanai, on Wednesday into early Thursday.

SURF: Swells generated by Madeline are expected to build from east to west across the Hawaiian Islands later today and tonight, possibly becoming damaging along east facing shorelines of Hawaii County and eastern portions of the Island of Maui on Wednesday into Thursday.

RAIN: Heavy rains associated with Madeline are expected to reach Hawaii County on Wednesday, and may impact other Hawaiian Islands later Wednesday through Thursday. Madeline is expected to produce total rain accumulations of 5 to 10 inches, with isolated maximum amounts near 15 inches, across the Big Island, especially over windward portions. This rainfall may lead to dangerous flash floods and mudslides. Madeline may produce up to 4 inches of rainfall across Maui County.

STORM SURGE: Depending on the track of Madeline, the combination of storm surge and tides could cause normally dry areas near the coast to become flooded. The water could reach 1 to 3 feet above ground if peak surge were to coincide with high tide. The surge would be accompanied by large damaging surf and can vary over short distances.

# **NEXT ADVISORY**

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Next intermediate advisory at 800 PM HST. Next complete advisory at 1100 PM HST.

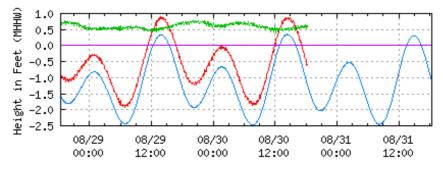
Forecaster Wroe

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: <u>Hilo, Hilo Bay, Kuhio Bay - Water Level, Hilo, Hilo Bay, Kuhio Bay - Winds, Hilo, Hilo Bay, Kuhio Bay - Barometric, Kawaihae - Water Level, Kawaihae - Winds, Kawaihae - Barometric, Kahului, Kahului Harbor - Water Level, Kawaihae - Winds, Kawaihae - Barometric, Kahului, Kahului Harbor - Water Level, Kawaihae - Winds, Kawaihae - Winds, Kawaihae - Water Level, Kawaihae - Water Level, Kawaihae - Winds, Kawaihae - Water Level, Ka</u>

<u>Level, Kahului, Kahului Harbor - Winds, Kahului, Kahului Harbor - Barometric, Mokuoloe - Water Level, Mokuoloe - Winds, Mokuoloe - Barometric, Honolulu - Water Level, Honolulu - Winds, Honolulu - Barometric, Nawiliwili - Water Level, Nawiliwili - Winds, Nawiliwili - Barometric</u>

# NOAA/NOS/CO-OPS <u>1617760 Hilo, Hilo Bay, Kuhio Bay, HI</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)

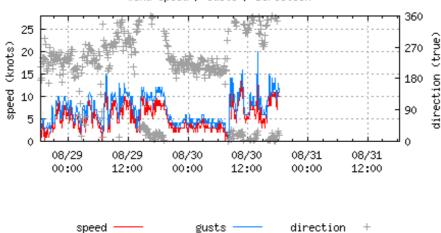


Predicted Tide (Obs-Pred) (Obs-Pred) MHHW

Last Observed Sample: 08/30/2016 18:12 (HST). Data relative to MHHW Observed: -0.58 ft. Predicted: -1.20 ft. Residual: 0.62 ft. Historical Maximum Water Level: Jan 20 1981, 1.37 ft.

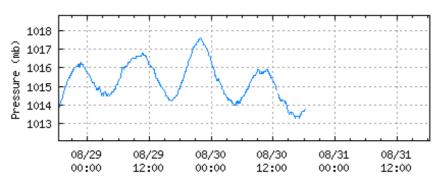
Next High Tide: 08/31/2016 02:19 (HST), -0.52 ft.

# NOAA/NOS/CO-OPS 1617760 Hilo, Hilo Bay, Kuhio Bay, HI Wind Speed / Gusts / Direction



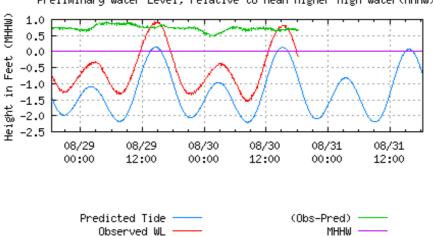
Last Observed Sample: 08/30/2016 18:12 (HST) Wind Speed: 10 knots Gusts: 11 knots Direction: 19° T

## NOAA/NOS/CO-OPS 1617760 Hilo, Hilo Bay, Kuhio Bay, HI Barometric Pressure

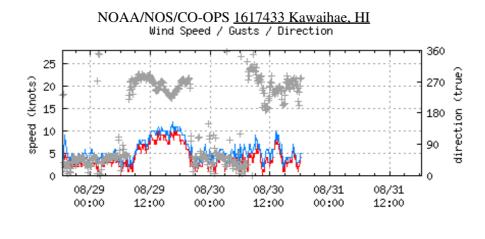


barometric pressure ——
Last Observed Sample: 08/30/2016 18:12 (HST)
Barometric Pressure: 1013.8 mb

# NOAA/NOS/CO-OPS <u>1617433 Kawaihae, HI</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 08/30/2016 18:12 (HST). Data relative to MHHW Observed: -0.15 ft. Predicted: -0.84 ft. Residual: 0.69 ft. Historical Maximum Water Level: Dec 13 2008, 1.22 ft. Next High Tide: 08/31/2016 03:25 (HST), -0.83 ft.



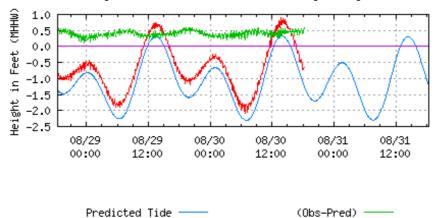
speed — gusts — direction + Last Observed Sample: 08/30/2016 18:12 (HST)
Wind Speed: 4 knots Gusts: 5 knots Direction: 280° T

#### NOAA/NOS/CO-OPS 1617433 Kawaihae, HI Barometric Pressure 1018 Pressure (mb) 1017 1016 1015 1014 1013 08/29 08/29 08/30 08/30 08/31 08/31 00:00 12:00 00:00 12:00 00:00 12:00

Last Observed Sample: 08/30/2016 18:12 (HST)
Barometric Pressure: 1013.2 mb

barometric pressure

# NOAA/NOS/CO-OPS 1615680 Kahului, Kahului Harbor, HI Preliminary Water Level, relative to Mean Higher High Water(MHHW)



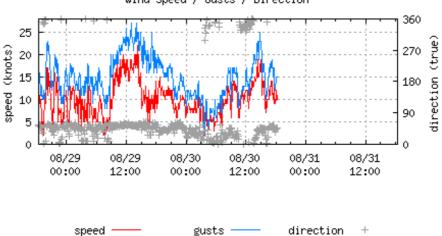
Last Observed Sample: 08/30/2016 18:12 (HST). Data relative to MHHW Observed: -0.66 ft. Predicted: -1.24 ft. Residual: 0.58 ft.

MHHW

Observed WL

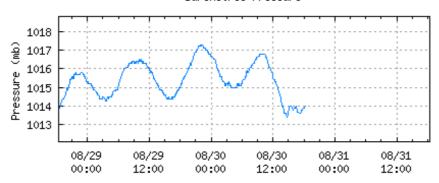
Historical Maximum Water Level: Dec 20 1968, 1.23 ft. Next High Tide: 08/31/2016 01:34 (HST), -0.51 ft.

# NOAA/NOS/CO-OPS 1615680 Kahului, Kahului Harbor, HI Wind Speed / Gusts / Direction



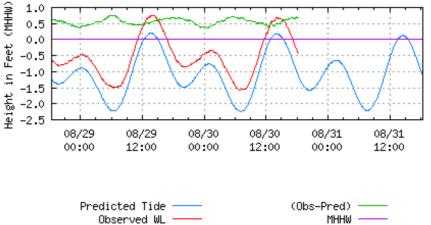
Last Observed Sample: 08/30/2016 18:12 (HST) Wind Speed: 10 knots Gusts: 15 knots Direction: 46° T

## NOAA/NOS/CO-OPS 1615680 Kahului, Kahului Harbor, HI Barometric Pressure



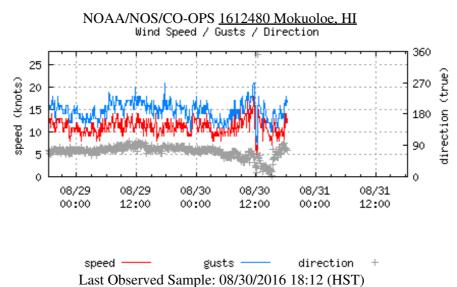
barometric pressure -Last Observed Sample: 08/30/2016 18:12 (HST) Barometric Pressure: 1014.0 mb

# NOAA/NOS/CO-OPS 1612480 Mokuoloe, HI Preliminary Water Level, relative to Mean Higher High Water(MHHW) 1.0



Last Observed Sample: 08/30/2016 18:12 (HST). Data relative to MHHW Observed: -0.44 ft. Predicted: -1.12 ft. Residual: 0.68 ft. Historical Maximum Water Level: Jan 8 1974, 1.46 ft. Next High Tide: 08/31/2016 01:35 (HST), -0.65 ft.

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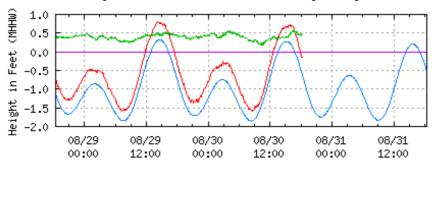
Wind Speed: 12 knots Gusts: 17 knots Direction: 77° T

#### NOAA/NOS/CO-OPS 1612480 Mokuoloe, HI Barometric Pressure 1018 Pressure (mb) 1017 1016 1015 1014 1013 08/29 08/29 08/30 08/30 08/31 08/31 00:00 12:00 00:00 12:00 00:00 12:00

Last Observed Sample: 08/30/2016 18:12 (HST)
Barometric Pressure: 1014.6 mb

barometric pressure

# NOAA/NOS/CO-OPS <u>1612340 Honolulu, HI</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 08/30/2016 18:12 (HST). Data relative to MHHW Observed: -0.13 ft. Predicted: -0.61 ft. Residual: 0.48 ft.

(Obs-Pred)

MHHW

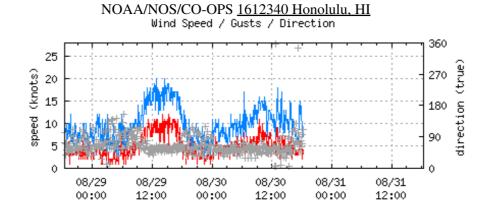
direction

Predicted Tide

speed

Observed WL

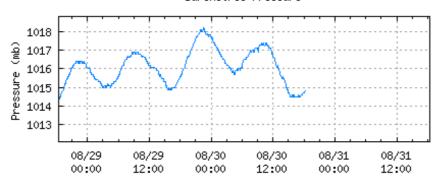
Historical Maximum Water Level: Feb 14 1967, 1.49 ft. Next High Tide: 08/31/2016 03:23 (HST), -0.63 ft.



Last Observed Sample: 08/30/2016 18:12 (HST) Wind Speed: 4 knots Gusts: 7 knots Direction: 110° T

gusts

# NOAA/NOS/CO-OPS <u>1612340 Honolulu, HI</u> Barometric Pressure



barometric pressure ——
Last Observed Sample: 08/30/2016 18:12 (HST)
Barometric Pressure: 1014.8 mb

#### NOAA/NOS/CO-OPS 1611400 Nawiliwili, HI Preliminary Water Level, relative to Mean Higher High Water (MHHW) Height in Feet (MHHW) 1.0 0.5 0.0 -0.5 -1.0 -1.5-2.0 08/29 08/29 08/30 08/30 08/31 08/31 00:00 12:00 00:00 12:00 00:00 12:00

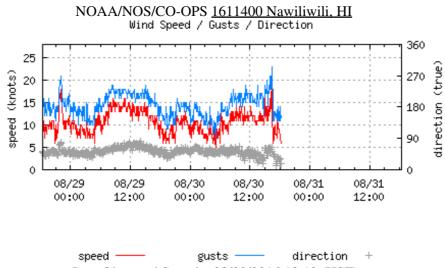
Last Observed Sample: 08/30/2016 18:12 (HST). Data relative to MHHW Observed: -0.44 ft. Predicted: -0.65 ft. Residual: 0.21 ft. Historical Maximum Water Level: Sep 11 1992, 3.15 ft. Next High Tide: 08/31/2016 02:59 (HST), -0.60 ft.

(Obs-Pred)

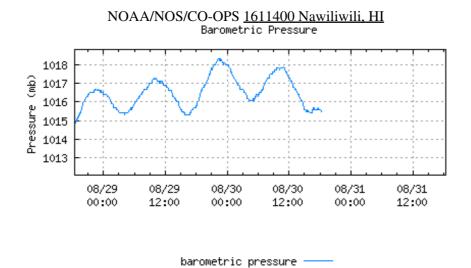
MHHW

Predicted Tide

Observed WL



Last Observed Sample: 08/30/2016 18:12 (HST) Wind Speed: 6 knots Gusts: 12 knots Direction: 19° T



Last Observed Sample: 08/30/2016 18:12 (HST)
Barometric Pressure: 1015.5 mb

Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
1617760	Hilo, Hilo Bay, Kuhio Bay, HI	08/30/2016 18:12 (HST)	-0.58 ft	-1.20 ft	0.62 ft	0.88 ft
1617433	Kawaihae, HI	08/30/2016 18:12 (HST)	-0.15 ft	-0.84 ft	0.69 ft	0.82 ft
1615680	Kahului, Kahului Harbor, HI	08/30/2016 18:12 (HST)	-0.66 ft	-1.24 ft	0.58 ft	0.91 ft
1612480	Mokuoloe, HI	08/30/2016 18:12 (HST)	-0.44 ft	-1.12 ft	0.68 ft	0.69 ft
1612340	Honolulu, HI	08/30/2016 18:12 (HST)	-0.13 ft	-0.61 ft	0.48 ft	0.72 ft
1611400	Nawiliwili, HI	08/30/2016 18:12 (HST)	-0.44 ft	-0.65 ft	0.21 ft	0.61 ft

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce